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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,085	11/29/2004	Ralph Reiche	2002P04430WOUS	9655

7590 03/13/2007

Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER	
TUROCY, DAVID P	
ART UNIT	PAPER NUMBER
1762	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/516,085	REICHE ET AL.	
	Examiner	Art Unit	
	David Turocy	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *28,29,34,38,39,43 and 47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *28,29,34,38,39,43 and 47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/19/07 has been entered.

Response to Amendment

2. Applicant's amendments, filed 1/19/07, have been fully considered and reviewed by the examiner. The examiner notes the cancellation of claims 30-33, 35-3.7, 40-42, and 44-46. Claims 28, 29, 34, 28, 39, 43, and 47 remain pending in the instant application.

In view of the amendments, the examiner has withdrawn the 35 USC 112 1st paragraph rejections have been withdrawn.

Response to Arguments

Applicant's arguments filed 1/19/2007 have been fully considered but they are not persuasive.

The applicant has provided a translation of PCT/EP03/05573 and has submitted foreign priority papers for EP 02011967.7, however, the prior art, WO 03/029521 is

published prior to the publication date of PCT/EP03/05573 and therefore the applicants are required to submit a certified translation of EP 02011967.7 to overcome the prior art rejection and perfect the priority date. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15. Therefore, the rejection over WO 03/029521 is maintained accordingly.

The applicant has argued against the Czech '668 reference, stating the reference discloses aluminization at a temperature below the solution temperature and one of ordinary skill in the art would appreciate that phase change of gamma and gamma prime phases only occur at or above the solution temperature. However, the applicant has provided not factual evidence to support their assertions and therefore such assertions are given little weight and deemed mere attorney speculation. Argument's arguments must be considered mere attorney speculation not supported by evidence. *In re Scarborough*, 500 F.2d 560,566 182 USPQ 298,302 (CCPA 1974). Additionally, the examiner notes the specification does not provide such as factual nor does the specification describe a heat treatment temperature above the solution temperature. The specification is silent as to the heat treatment temperature and the solution temperature. Therefore, the rejection has been maintained below.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 28, 29, 34, 38, 39, 43 and 47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims require heating to a temperature sufficient to convert the phases to aluminum rich beta phase; however, it is unclear what temperature is sufficient to convert such phases as claimed. Therefore, for the purposes of applying art the examiner is applying any heat treatment will necessarily have the same results. See for example, paragraph 0034 of the present specification, which discloses "a heat treatment" results in altering the chemical composition and materials.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claims 28, 29, 34, 38, 39, and 43 are rejected under 35 U.S.C. 102(a) as being anticipated by WO 03/029521 by Czech et al (Czech '521)

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

*** Please note US Patent Publication 2004/0244817 by Czech et al. is the publication which issued from the national stage application based on WO 03/029521. This publication is being used as an English translation of WO 03/029521, therefore all references to paragraphs are found in 2004/0244817 ***

Czech '521 discloses a method for uniformly removing a MCrAlY coating with corrosive products, comprising, first coarsely removing portions of the bonding layer, and then completely diffusing from the gas phase a diffusion agent comprising two elements into the remaining portion of the bonding layer and then uniformly removing the bonding layer using an acid bath, wherein the act of immersion can be considered mechanical, giving the term its broadest reasonable interpretation (paragraph 0018, 0032, 0037, 0068, 0071). Czech '521 discloses a thermal treatment to completely diffuse the diffusion agent into the bonding layer (0038). Czech '521 discloses including cobalt with aluminum (0068).

Czech '521 does not disclose converting the bonding layer to a different phase or making the bonding layer more brittle. However, the prior art and the present claims, reflected by claims 28 and 38, teach all the same process steps and thus the results obtained by applicants process must necessarily be the same as those obtained by the

prior art. Therefore by diffusion coating to make corrosive products more uniformly removed by acid treatment, it must necessarily result in converting the bonding layer to a different phase or making the bonding layer more brittle. Either 1) the applicant and the prior art have different definitions diffusion of aluminum into a bonding layer, or 2) the applicant is using other process steps or parameters that are not shown in the claims.

Claims 29 and 39: Czech '521 discloses sand blasting or acid treatment (0019,0051).

Claims 34 and 43: Czech '521 discloses MCrAlY, wherein M is nickel, cobalt or iron (0005).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 28, 29, 34, 38, 39, 43 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6217668 by Czech et al. (Czech '668) in view of US Patent 6042879 by Draghi et al. and further in view of US Patent 3184292 by Argyriades et al.

Czech '668 disclose a method for uniformly removing corrosive products on a component, which comprises a overlay and/or protective coating having corrosion

(Column 1, lines 40-50 abstract). Czech '668 discloses a first step of coarsely removing portions of the bonding layer and a second step of completely diffusing from the gas phase a diffusion agent comprising two components, and then removing by exposing to an acid bath or mechanical means (abstract, column 6, lines 5-28, column 4, lines 15-34). Czech '668 discloses a thermal treatment to completely diffuse the diffusion agent (column 4, lines 34-50). Since the applicants have not provided a disclosure of what temperature is sufficient to convert the remaining portions of the bond layer to the different phases as claimed, the examiner is applying any heat treatment will necessarily have the same results absent a factual showing to the contrary. See for example, paragraph 0034 of the present specification, which discloses "a heat treatment" results in altering the chemical composition and materials

Czech '668 does not disclose converting the bonding layer to a different phase or making the bonding layer more brittle. However, the prior art and the present claims, reflected by claims 28 and 38, teach all the same process steps and thus the results obtained by applicants process must necessarily be the same as those obtained by the prior art. Therefore by diffusion coating to make corrosive products more uniformly removed by acid treatment and subjecting to a heat treatment, it must necessarily result in converting the bonding layer to a different phase or making the bonding layer more brittle. Either 1) the applicant and the prior art have different definitions diffusion of aluminum into a bonding layer and heat treating, or 2) the applicant is using other process steps or parameters that are not shown in the claims.

Czech '668 discloses a protective coating on a superalloy but fails to disclose the protective coating is a MCrAlY bond coating, however, Draghi, discloses known protective coatings for superalloy components are MCrAlY coatings, wherein M can be nickel or cobalt (Column 4, lines 3-19). Draghi discloses the MCrAlY is subject to corrosion and are refurbished by aluminizing because the aluminum content becomes deplete and therefore makes the MCrAlY more easily removed (Column 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Czech '668 to use the MCrAlY protective coating as suggested by Draghi because Czech '668 discloses removing protective coatings on superalloys and Draghi discloses MCrAlY is a known and suitable protective coating for superalloys and therefore one would reasonably expect success.

Czech '668 in view of Draghi discloses co-diffusing aluminum and another element into the substrate. However, Czech '668 in view of Draghi fails to disclose co-diffusing cobalt with aluminum. However Argyriades discloses forming oxidation resistant diffusion coatings on a alloy and teaches co-diffusing aluminum with cobalt are known and suitable elements (Column 2, lines 48-61), the selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Czech '668 in view of Draghi to co-diffuse aluminum and cobalt with a reasonable expectation of success because Argyriades discloses

aluminum and cobalt are known and suitable elements to provide a co-diffused coating on an alloy substrate.

Claims 29 and 39: Czech '668 discloses sand blasting or acid treatment (column 3, lines 42-50).

Claim 47: Czech '668 discloses sand blasting to remove the diffused layer (Column 6, lines 21-25).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David Turocy
AU 1762